

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH W. ALVES and THOMAS J. BROBST

Appeal No. 2003-1486
Application No. 09/152,016

HEARD: January 22, 2004

Before TORCZON, GROSS, and BLANKENSHIP, ***Administrative Patent Judges.***

GROSS, ***Administrative Patent Judge.***

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 4 through 11 and 13 through 18, which are all of the claims pending in this application.

Appellants' invention relates to a scanning apparatus with a rotatable mirrored surface and a detector sized and positioned to be fully illuminated in any rotation of the mirrored surface without focusing the directed reflected light. Claim 4 is illustrative of the claimed invention, and it reads as follows:

4. An apparatus for scanning an object comprising:

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means for generating a light beam;

a rotatable mirrored surface positioned to directly receive the generated light beam from the light generating means and direct the generated light beam towards the object and the mirrored surface positioned to directly receive light reflected by the object; and

means for detecting light positioned to directly receive the directed reflected light from the mirrored surface; and

wherein as the rotatable mirrored surface rotates a cross section of the rotatable mirrored surface changes and the detector is sized and positioned to be fully illuminated in any rotation of the mirrored surface without focusing the directed reflected light when light reflects from the object.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Frontino	5,010,242	Apr. 23, 1991
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Claims 4 through 11 and 13 through 18 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 4, 6 through 9, 11, 13, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Frontino.

Claims 5, 10, 15, 17, and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Frontino.

Reference is made to the Examiner's Answer (Paper No. 23, mailed November 19, 2002) for the examiner's complete reasoning in support of the rejections, and to appellants' Brief (Paper No.

21, filed August 5, 2002) and Reply Brief (Paper No. 24, filed January 21, 2003) for appellants' arguments thereagainst.

OPINION

We have carefully considered the claims, the applied prior art references, and the respective positions articulated by appellants and the examiner. As a consequence of our review, we will reverse.

The examiner contends (Answer, pages 3-4) that

[t]he recitation that light is not focussed renders the term "fully" [in the phrase "fully illuminated"] indefinite. Figures 1 and 3 appear to show a lens integrated with the detector package. If no lens is integrated with the detector package, there is no physical basis for the phantom rays 203 in figure 3, and the corresponding term "fully."

The examiner explains (Answer, page 8) that he is reading "fully illuminated" in the last paragraph of claim 4 as meaning that the detector "receive[s] 'all illumination' or the 'total illumination' or the 'full illumination.'" He continues, "Clearly, all of the diffused light is not incident on the detector, and it is not fully illuminated by the diffused light." However, that the detector is "fully illuminated" merely requires that every portion of the detector be illuminated, not that all of the light be incident on the detector. A small fraction of the light could fully illuminate the detector. Accordingly, we

will not sustain the rejection of claim 4 and its dependents, claims 5 through 8 under 35 U.S.C. § 112, second paragraph. Additionally, as independent claims 9 and 16 include the same language as claim 4, we will not sustain the rejection under the second paragraph of 35 U.S.C. § 112 of claims 9, 16, and their dependents, claims 10, 11, 13 through 15, 17, and 18.

Regarding the anticipation rejection of claims 4, 6 through 9, 11, 13, 14, and 16 over Frontino, appellants argue that Frontino in Figure 1 includes a mirror 26 with a concave face, which Frontino discloses (column 4, lines 50-52) "focuses and reflects this reflected light to an optical signal receiving means **34**." Frontino also references scanning mirror 26 in the discussions of Figures 3 through 7. Therefore, we agree with appellants that Frontino, at least in the embodiments of Figures 3 through 7, focuses the light reflected from the object, and thereby fails to satisfy the claim limitation of "without focusing the directed reflected light," which appears in each of independent claims 4, 9, and 16. In the discussion of Figures 8 and 9, Frontino uses a reflecting polygon 26, instead of mirror 26, and lacks any disclosure as to whether the polygon focuses. Frontino is thus ambiguous as to whether the embodiments of Figures 8 and 9 focus the reflected light, as required by the

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claims. Further, Frontino discloses nothing about the detector for the embodiments of Figures 8 and 9, so it is unclear if the detector is fully illuminated, as required by the claims. Since Frontino fails to satisfy each and every limitation, Frontino cannot anticipate the claims. Accordingly, we will not sustain the anticipation rejection of claims 4, 6 through 9, 11, 13, 14, and 16.

As to the obviousness rejection of claims 5, 10, 15, 17, and 18, the examiner relies solely on Frontino, which we have found ***supra*** to be lacking as to the limitation of "without focusing." Since the examiner has provided no further art nor any convincing line of reasoning why it would have been obvious to modify Frontino to overcome the above-noted deficiency, we cannot sustain the obviousness rejection of claims 5, 10, 15, 17, and 18.

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CONCLUSION

The decision of the examiner rejecting claims 4 through 11 and 13 through 18 under 35 U.S.C. § 112, second paragraph, claims 4, 6 through 9, 11, 13, 14, and 16 under 35 U.S.C. § 102(b), and claims 5, 10, 15, 17, and 18 under 35 U.S.C. § 103 is reversed.

REVERSED

RICHARD TORCZON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ANITA PELLMAN GROSS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

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